

A NEW SPECIES OF *ANASA* (HEMIPTERA: COREIDAE) FROM THE DOMINICAN REPUBLIC¹

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ABSTRACT: A new species of *Anasa* from the Dominican Republic is described and illustrated. A key to the known Dominican species is included.

Brailovsky (1985) reviewed the genus *Anasa* Amyot and Serville and recognized, described, or redescribed each of 63 species. Drawings of the head, pronotum, male genital capsule, parameres, female genitalia, and spermatheca were provided, as well as a key to the known taxa. Later Brailovsky (1990) added three new species from México, El Salvador, and French Guyana

The genus is characterized by hind femora that usually are armed with one or more subdistal spines, humeral angles that are not acutely spined, a tylus that is not compressed and is elevated slightly above the juga, a rostrum that reaches or extends beyond the middle third of the mesosternum, and a head that below the antenniferous tubercles lacks a raised shelllike plate.

Two species of *Anasa*, *A. bellator* (Fabricius) and *A. scorbutica* (Fabricius), presently are known from the Dominican Republic. In this paper a third species is described.

Acronyms used: University of Georgia, Museum of Natural History, Athens, Georgia (UGCA), and Colección Entomológica, Instituto de Biología, Universidad Nacional Autónoma de México (UNAM).

All measurements are given in millimeters.

Anasa bellator (Fabricius)

Figures 2, 6, 10

Cinex bellator Fabricius, 1787. Man. Ins. II: 286.

This species is distinguished easily by the following characters:

Head behind each base of antenniferous tubercle armed with short acute spine that reaches base of antennal segment I, spine shorter than diameter of eye; pronotum declivent, with short setigerous hairs slightly longer than the semidecumbent hairs of corium and clavus; humeral angles slightly exposed, weakly angulate; femora unarmed; antennal segments II-III yellow with two wide black rings, antennal segment IV black with apical third yellow (Figs. 2, 6).

Distribution. This species is widely distributed throughout Mexico, Central America, West Indies, and South America. It has been recorded in Dominican Republic from La Plata and 21 km N of Higüey (Brailovsky 1985).

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Anasa pisina Brailovsky, NEW SPECIES

Figures 1, 3, 7, 11

Description. Structure. Male. Head wider than long, quadrate, dorsally flat, nondeclivent; tylus unarmed, extending anteriorly to juga, slightly raised in lateral view; juga unarmed, thickened; head behind each base of antenniferous tubercle armed with short acute spine that reaches base of antennal segment I, spine shorter than diameter of eye; preocellar pit deep; postocular tubercle protuberant; vertex with deep longitudinal furrow; buccula rounded, without teeth, short, elevated, not projecting beyond antenniferous tubercles; rostrum reaching middle third of mesosternum.

Thorax. Pronotum wider than long, trapezoid, declivent, bilobed; collar wide; anterior lobe shorter than posterior lobe, with anterolateral margins nodulose and serrate; posterior lobe with anterolateral margins slightly dentate; posterolateral border sinuate, smooth; posterior border straight, smooth; triangular process short, acute; callar region slightly convex, behind it with two short longitudinal depressions lateral to midline; frontal angles with broad conical lobe; humeral angles exposed, produced laterally, directed upward, with upper border smooth, inner border sparsely tuberculate. Anterior lobe of metathoracic peritreme reniform; posterior lobe acute, short (Figs. 3, 7).

Legs. Front and middle femora unarmed; hind femur ventrally armed with blunt and inconspicuous subdistal spinelike tubercles.

Hemelytra. Macropterous, reaching apex of last abdominal segment.

Abdomen. Connexivum widely exposed, with posterior angles complete, not projected into spines.

Genital capsule. Posteroventral border with small U-shaped concavity at middle third (Fig. 11).

Integument. Body surface dull; posterior lobe of pronotal disc, scutellum, clavus, corium, propleura, mesopleura, and metapleura densely punctate; head, anterior lobe of pronotal disc, prosternum, mesosternum, metasternum, and abdominal sterna with scattered punctures; connexival segments without punctures. Head dorsally, antennal segments, pronotum, scutellum, clavus, corium, prosternum, mesosternum, metasternum, legs, connexival segments, and abdominal sterna with short decumbent to suberect setigerous hairs; head ventrally, propleura, mesopleura, and metapleura glabrous. Ventral surface of head including bucculae, and femora with scattered black tubercles.

Dorsal coloration. Ground color dark orange with punctures and tubercles black; antennal segments chestnut orange with scattered reddish brown tubercles on segments I to III; connexival segments III to VII black with anterior third orange-yellow; head black with short stripe near eyes, tylus, juga, and postocular tubercle dark orange; triangular process of pronotum yellow; hemelytral membrane dark brown; dorsal abdominal segments bright orange.

Ventral coloration. Including rostral segments, legs, and genital capsule pale orange with following areas black to reddish brown: apex of rostral segment IV, punctures, and few scattered discoidal spots on coxae, trochanters, femora, tibiae, and abdominal sterna; anterior and posterior lobe of metathoracic peritreme creamy yellow.

Female. Similar to male. Connexival segments VIII-IX black with anterior third orange; genital plates pale orange with black to reddish brown punctures.

Measurements. First male, then female. Head length 1.24, 1.32, width across eyes 1.30, 1.68, interocular space 0.86, 0.96, interocellar space 0.42, 0.48, preocular distance 0.72, 0.80; length of antennal segments: I, 1.64, 1.76, II, 1.76, 2.06, III, 1.72, 2.04, IV, 1.50, 1.72. Pronotum: Length 2.50, 2.78, width across frontal angles 1.24, 1.32, width across humeral angles 4.64, 5.40. Scutellar length 1.48, 1.64, width 1.76, 1.96. Body length 10.90, 13.40.

Type material. Holotype: ♂, Dominican Republic: La Vega, vic. Salto de Aguas Blancas, 19-VII-1996, R. Turnbow (UGCA). Paratypes. 2♀, same data as holotype (UGCA, UNAM).

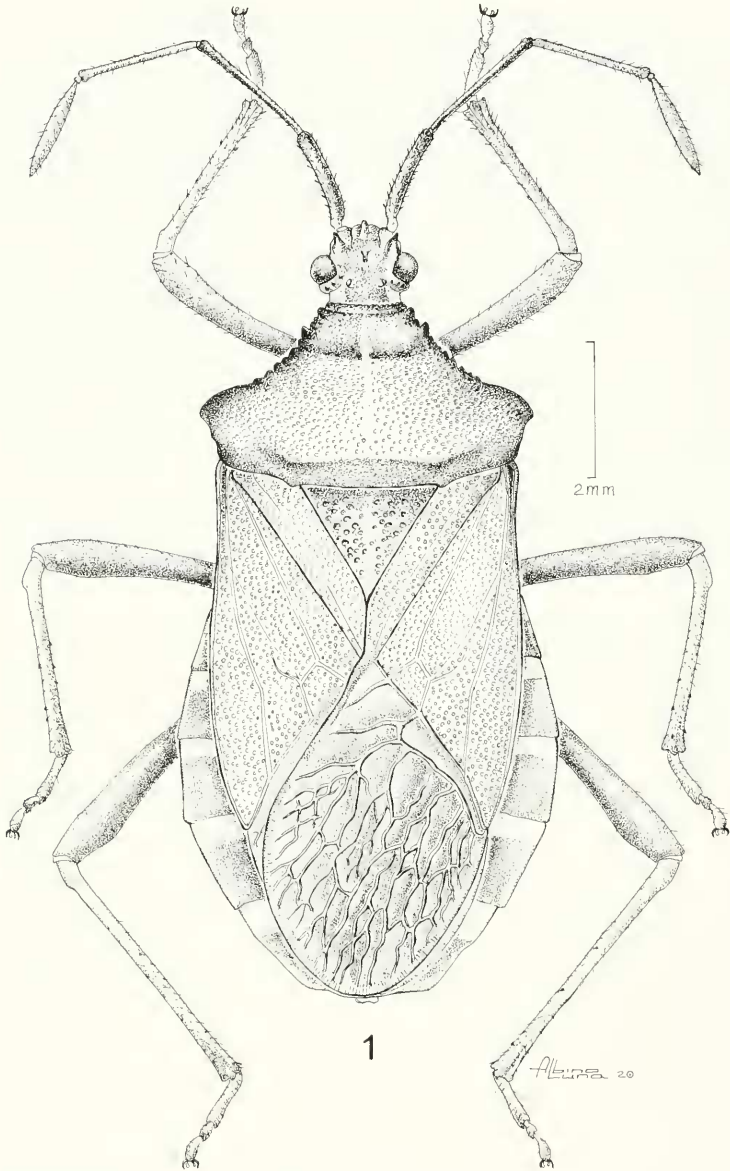


Figure 1. *Anasa pisina* Brailovsky, dorsal view. Male.

Discussion. This species resembles *A. tenebricosa* Distant in having the humeral angles exposed, produced laterally, similar to short wing directed upward, antennal segments I-IV chestnut orange, femora with black discoidal spots, and pronotum not strongly declivent, and with short hairs.

In *A. pisina*, the head behind base of each antenniferous tubercle armed with short acute spine (Figs. 2, 7), the front and middle femora are unarmed, and the dorsal abdominal segments are bright orange. In *A. tenebricosa* the head behind base of each antenniferous tubercle is unarmed (Figs. 5, 9), the front and middle femora are armed ventrally, and the dorsal abdominal segments are black with odoriferous scars IV-V, and V-VI dark yellow. Postero-ventral edge of male genital capsule in caudal view slightly distinct (Figs. 11, 13).

Etymology. From the Latin "*pisina*", small.

Anasa scorbutica (Fabricius)

Figures 4, 8, 12

Cimex scorbuticus Fabricius, 1775. Syst. Ent.: 706.

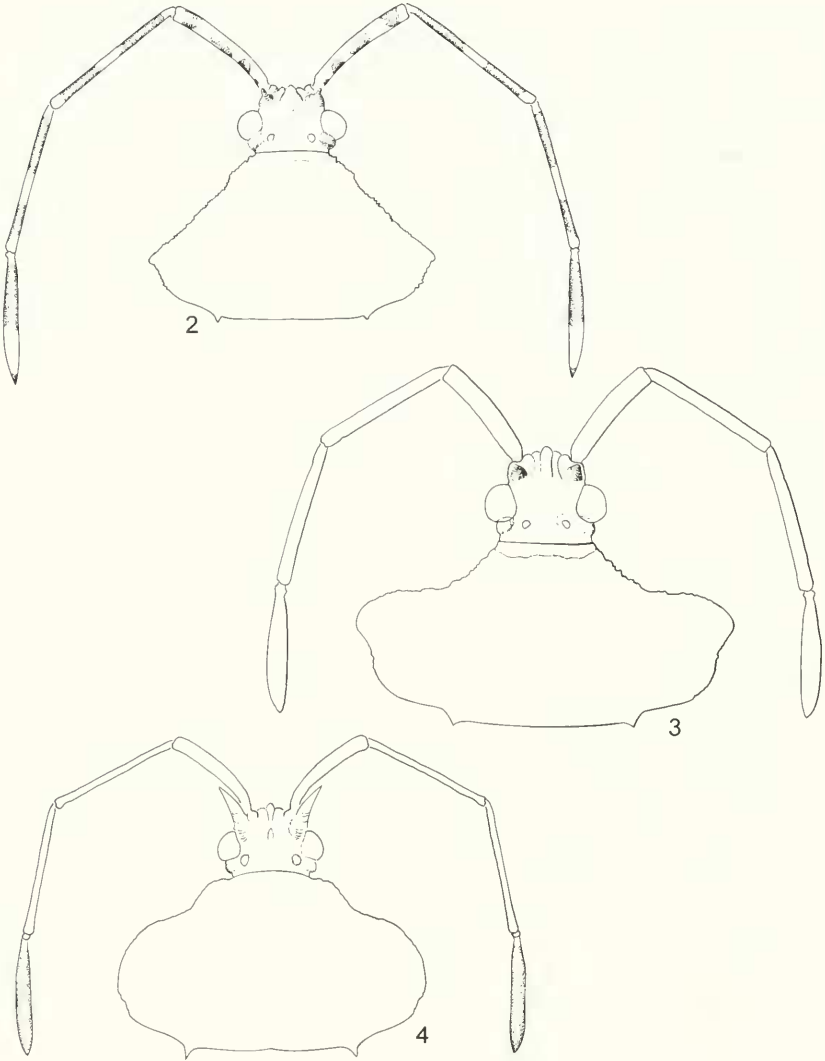
This peculiar bug is recognized by the following characters:

Head behind base of each antenniferous tubercles armed with prominent spine, spine longer than diameter of eye, pronotum strongly declivent, bearing numerous erect setigerous hairs that contrast strongly with semidecumbent hairs of clavus and corium, humeral angles rounded, slightly exposed, femora armed ventrally with two subdistal spines; antennal segments II-III uniformly yellow to pale orange, IV orange hazel (Figs. 4, 8).

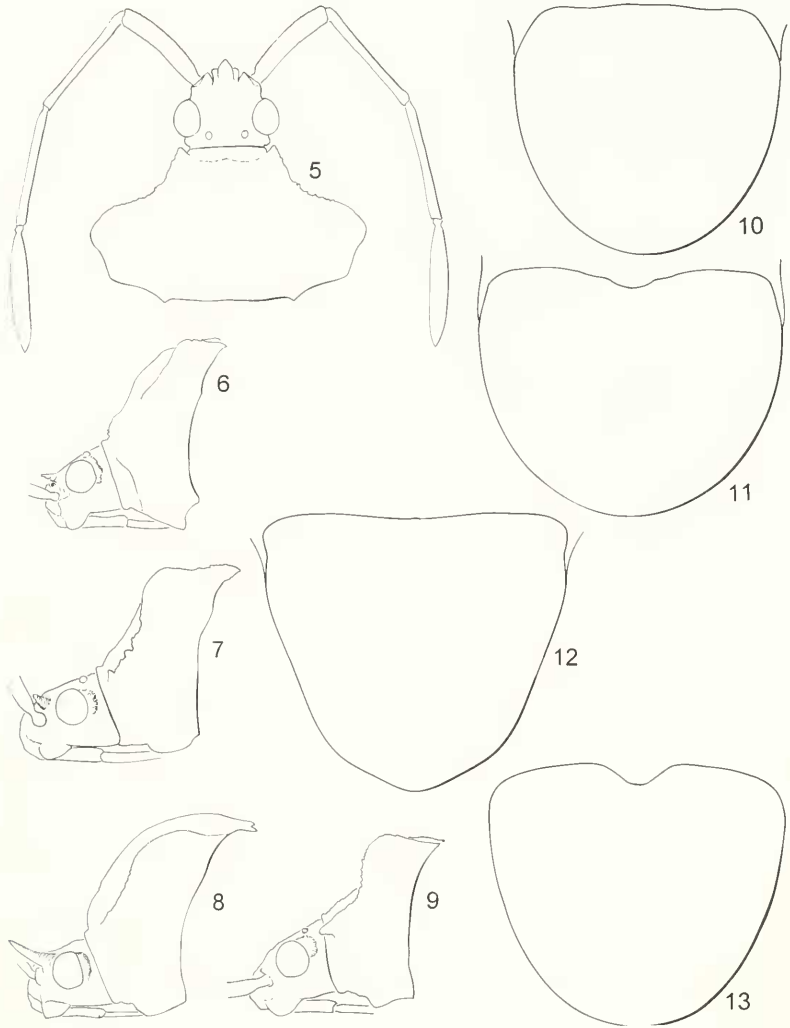
Distribution. This species is widely distributed, occurring in the United States, Mexico, Central America, West Indies, South America, and the Galapagos Archipelago. It has been recorded in Dominican Republic from Santo Domingo, Ciudad Trujillo, Pedro Sanchez, Puerto Plata, Villa Rivas, La Vaca (6 km W of Jayaco), San Cristobal, Rocachica and La Vega (30 km E of El Rio) (Brailovsky 1985).

Key to the Species of *Anasa* from the Dominican Republic

- 1 Antennal segments II-III distinctly annulate, alternating yellow and black rings (Fig. 2); hind femora unarmed *bellator* (Fabricius)
- 1' Antennal segments II-III, usually yellow to chestnut orange; hind femora armed ventrally 2
- 2 Head behind base of each antenniferous tubercle armed with prominent spine, spine longer than diameter of eye (Figs. 4, 8); front and middle femora armed; pronotal disc with numerous erect setigerous hairs, contrasting with semidecumbent hairs of clavus and corium *scorbutica* (Fabricius)
- 2' Head behind base of each antenniferous tubercle armed with short spine, spine shorter than diameter of eye (Figs. 3, 7); front and middle femora unarmed; pronotal disc, clavus and corium with short setigerous hairs . . . *pisina*, new species



Figures 2-4. Head and pronotum, *Anasa* spp. 2. *A. bellator* (Fabricius). 3. *A. pisina* Brailovsky. 4. *A. scorbutica* (Fabricius).



Figures 5-13. *Anasa* spp. 5. Head and pronotum, dorsal view, *A. tenebricosa* Distant. 6-9. Head and pronotum, lateral view. 6. *A. bellator* (Fabricius). 7. *A. pisina* Brailovsky. 8. *A. scorbutica* (Fabricius). 9. *A. tenebricosa* Distant. 10-13. Male genital capsule, caudal view. 10. *A. bellator* (Fabricius). 11. *A. pisina* Brailovsky. 12. *A. scorbutica* (Fabricius). 13. *A. tenebricosa* Distant.

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BOOKS RECEIVED AND BRIEFLY NOTED

STABILITY IN MODEL POPULATIONS. L.D. Mueller & A. Joshi. 2001. Princeton University Press, Princeton, NJ 08540. 319 pp. ppbk, \$29.95; Cloth \$79.50.

In this book, the authors examine current theories of population stability and show how recent laboratory research on model populations contributes to our understanding of population dynamics and the evolution of stability. They review the general theory of population stability and critically analyze techniques for inferring whether or not a given population is in balance.

MITES: ECOLOGY, EVOLUTION, AND BEHAVIOR. D.E. Walter & H.C. Proctor, 1999. (Oxford University Press. 322 pp. Cloth \$70.00.

This book surveys life cycles, feeding behavior, reproductive biology, and host associations of mites. Topics include: evolution of mites and other arachnids, mites in soil and water, mites on plants and animals, sperm transfer and reproduction, and mites as models of ecological and evolutionary theories.

PHEROMONES OF NON-LEPIDOPTERAN INSECTS ASSOCIATED WITH AGRICULTURAL PLANTS. J. Hardie & A.K. Minks, eds. 1999. CABI Publishing. 466 pp. Cloth \$140.00.

This book presents research from leading authorities on the most important insect groups (other than Lepidoptera) detailing the current progress of research within these groups.